



Ensuring Quality Results from Site Laboratories

PRESENTED BY
BARRY PEARCE
*LEARNING
MATTERS ETC*





Issues to be covered in this presentation

ISO 17025 accreditation

- HO vs Site Lab accreditation

External audits

ILC participation

Training/deeming staff competent

- Onsite
- ISO 17024

Conclusions



ISO 17025 accreditation: HO vs Site Lab accreditation

- If HO is the accredited facility, ILC required to be undertaken to confirm results
- Coupled to a good result in the NLA PTS from the HO
- Preferably ILC to cover more than just the HO & site facility to get a meaningful result
- If possible –site lab should join NLA PTS IF the testing ties in with the NLA's annual testing schedule.



ISO 17025 accreditation: HO vs Site Lab accreditation

- System to be used on site must replicate accredited HO system
- Internal audits **MUST** be conducted regularly by HO QC personnel
- External audits **MUST** be undertaken to verify system is working effectively as various material type testing begins onsite
- Very difficult to audit your own system effectively
- Costing for such audits to be includes in tender pricing
- **MUST** be planned to take place Provides everyone with piece of mind that the system is working effectively

External audits

- Preferably a SANAS assessor
- Spread out over contract period to coincide with the introduction of new material types
 - Typically Granular; Concrete; Stabilised; Binder & asphalt
- Report to be provided on findings
- Must be planned to occur timeously
- Costing to be included in tender pricing
- These are over & above the internal audits undertaken by the facility itself by HO personnel & the facilities staff themselves





ILC participation

- At the very least with the accredited HO BUT that's not exactly an ILC
- Preferably with multiple facilities improve statistical analysis & validity of ILC
- Preferably not within 1 organisation due to in-house errors
- Done at a time when the material types about to be used on site – not at beginning of contract
- If possible – do at least 1 round on the national PTS

Training - Onsite

- If there is budget, plan when it'll happen & action it
 - Budgets for training need to be sufficient to get the job done
 - Especially if the contact is “in the sticks”
 - Even more so if a 2nd establishment is required.
- Plan for the training to take place the sooner the better so that all can benefit from the money spent
- Should be planned to coincide with what's happening on the site similar to the external audits
- It's critical to get the staff up to speed in the latest methods & changes



Training - Onsite

- Remember - All Engineers decisions are based on results for the laboratory for approval / rejection of work done so make sure its all in place & functioning as effectively as possible.
- NB – you invariably can't train & deem competent within the duration of a contract
- The time is just too limited & competency will not have been achieved.
- Secondly, if the individual is not employed on another contract immediately (or at best shortly thereafter), their competence is lost & will need to be redone when next employed.



Training deeming staff competent - ISO 17024

- Unlikely to be able to be achieved on a site contract
- It's like a learners vs drivers licence
- 1st training
 - If it doesn't happen early, it delays the other aspects
- 2nd practice & get confident
 - Number of tests undertaken by trainee independently
- 3rd deeming competent
 - It's a fairly long process
 - Each basic method per material type is witnessed per trainee to be able to confirm competence
 - 1 day per material type
- Remember – to undertake each material type, sufficient testing needs to have been undertaken by the delegate & site work especially on binder & asphalt, won't generate sufficient work to deem competent during the contract period

Training deeming staff competent - ISO 17024

- Time period to be deemed competent.....
 - Per material type – depends on the contract & how many testers on site
 - Remember also, the competence will ONLY relate to a particular material type so how competent is the individual?
 - Sandy vs coarse/fine granular vs clay type materials react differently which is part of competence?
- Specifying MT vs SMT deeming competence becomes even more difficult.....
- Best solution
 - Letter of employment detailing work undertaken & the period of employment

Conclusions1

- Most of these items mentioned in this presentation are already included in tender documents

- **BUT**

- Not applied effectively & some times, **not at all....**
 - Numerous times, training occurs right at the end of the contract
 - just to “spend the money” or ☑
- Costing often insufficient to get undertaken on at least 2 training sessions on site & 3 external audits over the contract period.
 - For longer contract periods, more external audits may be required @ 1 / annum & training
- Laboratory training & audits not seen as part of the contracts critical path so left by the way side in planning for the “real work” to take place
 - Remember that the “real work” is approved from these testing facilities results



Conclusions2

- So judge for yourself – *how critical is the testing facility function ?*
- Penalties should be applied if such funding is available & not spent at the appropriate times to be effective
- Training – sufficiently early enough in the contract to have the desired effect & at the appropriate time
- No point in covering seal testing & asphalt if its going to take place in 18 months to 2 years....
- Audits – spread out over the contract period as the different material types start construction
- Propose at least 1 audit per annum for longer contracts after the initial 2 audits to get the lab up & running





Thanx for the opportunity to share these points achieving quality at site testing facilities.

Any questions?